

**ABSTRACT OF THE DISCLOSURE**

A  $\text{SnO}_2$  ISFET device and manufacturing method thereof.

The present invention prepares  $\text{SnO}_2$  as the detection membrane of an ISFET by sol-gel technology to obtain a

5  $\text{SnO}_2$  ISFET. The present invention also measures the current-voltage curve for different pH and temperatures

by a current measuring system. The temperature parameter of the  $\text{SnO}_2$  ISFET is calculated according to the

relationship between the current-voltage curve and  
10 temperature. In addition, the drift rate of the  $\text{SnO}_2$

ISFET for different pH and hysteresis width of the  $\text{SnO}_2$  ISFET for different pH loop are calculated by a constant

voltage/current circuit and a voltage-time recorder to measure the gate voltage of the  $\text{SnO}_2$  ISFET.